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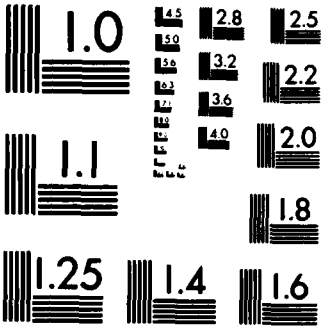

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Genetic Characterization of Insect Vectors of Diseases

Annual Report

Jeffrey R. Powell

February 1984

Supported by

U.S. ARMY MEDICAL RESEARCH AND DEVELOPMENT COMMENT
Fort Detrick, Frederick, Maryland 21701-5012

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Several population samples of Aedes aegypti were obtained from nine Caribbean Islands and anaylsed for genetic variation at 11 protein-coding loci. Considerable heterogeneity was observed.

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SUMMARY

Using starch gel electrophoresis, we have analyzed genetic variation at 11 loci in 18 Caribbean collections of Aedes aegypti. Our results show that, while there is some relationship between geographic proximity and genetic distance, the overall picture among islands is one of gene frequency patchiness, with some collections clearly not conforming to any geographic pattern. We attribute this to the combined effects of high rates of gene flow among islands and with the mainland American continent, and the activities of various vector control agencies in the region.

Originator Supplied Keywords include:

During the third year of this contract, two main projects were accomplished. First, a collecting trip to the Caribbean was made and several fresh samples of Aedes aegypti were obtained. These along with previous samples from the islands allow us to have a very good idea of the genetic structure of A. aegypti in this region of the world. The attached reprint presents more details.

The second accomplishment in the third year of the contract was the completion of the analysis of the data collected throughout the contract. Considering the large data set involved, this was a time-consuming and major undertaking. The second attached reprint presents details of the results.

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